

RESEARCH

● Josefina Santibáñez
Logroño (Spain)

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Virtual and Real Classroom in Learning Audiovisual Communication and Education

Aula virtual y presencial en aprendizaje de comunicación audiovisual y educación

ABSTRACT

The mixed model of Teaching-Learning aims to use Information and Communication Technologies (ICT) to guarantee an education more in line with the European Higher Education Area (EHEA). The following research objectives were formulated: 1) To find out the assessment made by teacher-training college students of the virtual classroom WebCT as an aid to face-to-face teaching. 2) To know the advantages of the use of WebCT and ICT by students in the case study: «Values and counter-values transmitted by television series for children and teenagers». The research has been carried out using a sample of 205 students from the University of La Rioja who attended a course on Technologies Applied to Education. The technique of qualitative and quantitative content analysis has been used to provide an objective, systematic and quantitative description content of different documents. The results obtained show that the communication, content and assessment tools of WebCT are favourably assessed by the students. We have reached the conclusion that WebCT and ICT constitute an aid to EHEA methodological innovation based on student-centred learning. The students demonstrated their audiovisual competence in the analysis of values and the construction of multimedia documents using different formats. Through their work these students give a new meaning to the use of television series in education.

RESUMEN

El modelo mixto de enseñanza-aprendizaje pretende utilizar las tecnologías de la información y de la comunicación (TIC) para garantizar una formación más ajustada al Espacio Europeo de Educación Superior (EEES). Se formularon los siguientes objetivos de investigación: Averiguar la valoración que hacen los alumnos de Magisterio del aula virtual WebCT como apoyo a la docencia presencial, y conocer las ventajas del uso de la WebCT y de las TIC por los alumnos en el estudio de caso: «Valores y contravalores transmitidos por series televisivas visionadas por niños y adolescentes». La investigación se realizó con una muestra de 205 alumnos de la Universidad de La Rioja que cursaban la asignatura de «Tecnologías aplicadas a la Educación». Para la descripción objetiva, sistemática y cuantitativa del contenido manifiesto de los documentos se ha utilizado la técnica de análisis de contenido cualitativa y cuantitativa. Los resultados obtenidos demuestran que las herramientas de comunicación, contenidos y evaluación son valoradas favorablemente por los alumnos. Se llega a la conclusión de que la WebCT y las TIC constituyen un apoyo a la innovación metodológica del EEES basada en el aprendizaje centrado en el alumno. Los alumnos evidencian su competencia audiovisual en los ámbitos de análisis de valores y de expresión a través de documentos audiovisuales en formatos multimedia. Dichos alumnos aportan un nuevo sentido innovador y creativo al uso docente de series televisivas.

KEYWORDS / PALABRAS CLAVE

Technology, audiovisual communication, education, distance learning, university teaching staff, television series, values.
Tecnologías, comunicación, educación, teleformación, profesorado, universidad, televisión, valores.

◆ Ph.D. Josefina Santibáñez Velilla. Full Professor of the Department of Educational Sciences of the Faculty of Arts and Education at the University of La Rioja (Spain) (josefina.santibanez@unirioja.es).

1. Introduction

The use of ICT in teaching has become the object of increasing interest, partly owing to the transformation of university teaching in line with the process of methodological convergence currently taking place in European universities and the appearance of distance learning platforms and virtual campuses (Anderson, 2004: 273-294).

La Rioja offers its students a mixed model of online teaching-learning through the WebCT distance learning platform, which aims to spread the use of information and communication technologies (ICT) and encourage their usage among most university students, to ensure that their training is more in tune with social demands and the European Higher Education Area (EHEA). For this purpose, mixed teaching is used to deliver the Audiovisual Communication and Education module of the subject Technology Applied to Education, as part of the Physical Education Teacher Training Diploma Course and the Musical Education Teacher Training Diploma Course. According to this model, most of the subject programme is developed in the classroom and approximately 30% of the contents are delivered through the virtual classroom.

In accordance with the new EHEA, learning requires a diversification of teaching methods, with a view to reducing traditional lecture-based methods and reassessing strategies that foster active and collaborative learning, for which information search engines and ICT tools on the Internet are extremely useful. Thanks to virtual training environments, we are moving towards a communicative teaching model in which students learn and the teacher takes on new roles both in teaching and in the creation of materials.

This paper is grounded in an interpretative perspective of the reality researched. The assessment provided is essentially based on the consideration of experimentation as a case with singularity and internal value, which can be extrapolated to situations that are similar although not the same. The aim is to reflect, analyse problems, find solutions and alternatives to the demand for student-focused teaching.

In many cases, the use of ICT as an aid to face-to-face teaching is still limited (Bennett & Bennett, 2003: 53-63). Some authors state that ICT are used on occasions to reproduce traditional teaching models and practices (Malikowski, Thompson & Theis, 2006: 163-174). The adoption of ICT can facilitate the transition from traditional teacher-centred models to other more student-focused models. Although the simple adoption of WebCT in teaching practice is just one of the variables in the process of teaching innovation

mediated by ICT, its usage also undoubtedly makes a significant educational contribution. In fact, researchers such as Samarawickrema and Stacey (2007: 313-333) have highlighted this. Currently, the aim is to guide and steer student learning towards the acquisition of skills, and specifically in this present study, competence in audiovisual information and communication through the use of WebCT.

Owing to the integration of new media tools and online information resources in the construction of knowledge, and in line with the characteristics of international parameters, in this stage of technological convergence, we should be thinking about delivering teacher training that integrates all media.

Furthermore, from an educational point of view, in today's society certain values seem to be marginalised by counter-values; hence the proposal to evaluate the extent to which cartoon series aimed at children and teenagers are hindering rather than helping their citizen and civic training.

Media literacy must take account of technological values, as well as social, democratic and ethical values. Using information and communication technologies from school age provides an opportunity and a means to achieving the civic and democratic training of students.

The digital competence of student teachers in their training to become future teachers encompasses both information and communication technologies. This competence is related with knowledge of the media and the basic use of the multimedia technologies required to produce information. According to Ferrés (2007: 100-107) «Someone who is competent in audiovisual communication must be capable of critically analysing audiovisual products and at the same time producing simple audiovisual messages that are understandable and communicatively effective».

The term value has a dual dimension: material and abstract. In order to materialize, values need a physical reference or fact in which they can be observed. Teaching to watch television critically requires educational intervention in the classroom, working on the contents that reach the students through the television.

Television teaches us a new way of knowing the world and real life, at times using manipulation and seduction. There is an undeniable need to use television as an educational resource in the teaching-learning process in order to build an innovative space in teaching practice. The most important thing is not just to know which media are used by the teachers, but also which cognitive strategies, procedures and attitudes are acquired or developed by the students.

Based on the curricular contributions of media

education, the transversal nature that media ought to have in curricula, which requires high quality teacher training.

Along these same lines, Aguaded (2005: 51-55) states that there is a need to insert learning about the televisual medium into the school context with a view to developing skills in order to capture the audiovisual message and take advantage of the educational possibilities offered by this medium as a teaching resource.

Television performs a social function and influences social behaviour through the transmission of information, values, education, culture and leisure, among others. The public service function of television according to García Matilla (2005: 33-44) is identified with the educational commitment to strengthening democratic values, as well as the need for media education related with the promotion of the information society and the creation of participatory channels.

The educational interest of research referring to television and education should be underscored. This interest was made patent at the Spanish-Portuguese Congress dedicated to this subject, entitled: «The television we want. Towards quality television». The event brought together over 400 professionals and researchers from Europe and the Americas – close to 20 countries – to discuss this communication medium, which so radically transformed the world in the late 20th Century, and how we are now glimpsing what it is starting to achieve even more so at the dawn of this new millennium (Aguaded, 2005: 17-18).

The media literacy of students is a new element and implies teacher training beyond the technical aspects. So, having set forth the most relevant information for this study, the following goals are proposed:

1) Discover the assessment made by student teachers of the WebCT virtual classroom as an aid to face-to-face teaching.

2) Determine the advantages of using WebCT and ICT in the collaborative learning of student teachers for the construction of knowledge, specifically in this case study referring to the analysis of: «Values and counter-values transmitted by television series aimed at children and teenagers».

2. Material and methods

Content analysis is defined as a research technique for the objective, systematic and quantitative descrip-

tion of the manifest content of communication.

This study used the technique of qualitative and quantitative content analysis, since on the one hand it reflects the assessment made by student teachers of the use of WebCT as an aid to face-to-face teaching, and on the other it compiles data pertaining to the content analysis of values and counter-values transmitted by television cartoon series aimed at children and teenagers, as well as the multimedia expression of said values and counter-values with the use of ICT.

To determine which television series were the most viewed among children and teenagers in the Autonomous Region of La Rioja, information was compiled from children, teenagers, families and teachers.

A sample of 205 student teachers was used from the University of La Rioja who were enrolled on the subject Technology Applied to Education for the part

Carefully chosen educational and curricular programmes undoubtedly provide didactic resources to acquire conceptual contents and promote the affective and emotional development of children and teenagers.

of the course dealing with Audiovisual Communication and Education. For the content analysis of values, a random sample of 24 episodes was chosen (of the 68 episodes analysed by the students) corresponding to two episodes from each of the 12 series, also selected randomly (from the 18 series analysed), owing to the fact that in some cases a number of episodes from the same series were repeated several times, which could provide a higher quantity of data with respect to other television series analysed that were less representative in terms of the number of episodes. To carry out this task, groups of 6 students were created so that each group would analyse two episodes of the same series. The sample was represented by two episodes from each of the following series: 1. Shin Chan. 2. Recess. 3. The Triplets. 4. Captain Tsubasa. 5. Futurama. 6. Knights of the Zodiac. 7. Family Guy. 8. The Simpsons. 9. Dave «The Barbarian». 10. Lilo and Stitch. 11. Oliver and Bengi. 12. Inspector Gadget.

2.1. Variables

Two types of variables were analysed, one type related with the evaluation made by the students of the virtual classroom WebCT as an aid to face-to-face

teaching, and the other referring to the advantages offered by the use of WebCT and ICT in the collaborative learning of student teachers in the construction of knowledge in the study of the practical case of the content analysis of «Values and counter-values transmitted by television series aimed at children and teenagers».

2.1.1. Independent variables related with the use of WebCT as an aid to face-to-face teaching

The contents of each of the following modules hosted on the WebCT platform were taken into account:

1) Communication module. This module encompasses all kinds of synchronous and asynchronous vir-

process, for example: 1. Corrected self-assessment exercises. 2. Grids to code and compile data about positive values and their corresponding associated values, as well as data referring to counter-values and their corresponding associated counter-values. 3. Guidelines for the practical presentation of group work. 4. Guidelines for putting together and presenting group portfolios recorded on DVD.

2.1.2. Independent variables: units applied to the content analysis of television series

The positive values and their corresponding counter-values or negative values constitute ten categories of analysis. In turn, each value or counter-value that forms a category is associated with related values and

attitudes, both positive and negative, which present shared characteristics (Cruz, 2006: 117-147). By way of an example, below are the ten categories of values and counter-values, and possible values, counter-values and attitudes related with each category: 1. Possible positive values, including values and related attitudes: 1) Friendship: loyalty, warmth and affection. 2) Trust: faith, belief and confi-

Thinking that future teachers can teach using technologies without having learned their didactic uses and possibilities for educational application tarnishes the curricula of Teaching Degrees in Universities that have achieved the anachronistic accomplishment of approving such technophobic curricula.

tual communication, such as e-mail, virtual tutorials and forums, among others.

2) Contents module. This module encompasses all the materials uploaded by the teacher to the WebCT virtual classroom to support and guide students: 1. A guide to reading the elements and characteristics of the image. 2. An advertising analysis questionnaire: practical activities. 3. Notes about audiovisual literacy. 4. Links to videos of audiovisual courses located in the library of the University of La Rioja (The sound image: reading the image and audiovisual media; The image; The moving image, script and production). 5. Links to articles in digitalised journals referring to: Social responsibility and the self-regulation of television channels in relation to children; The telecommunications ombudsman as an instrument for media education; Competition in audiovisual communication: dimensions and indicators, among others. 6. Examples of multimedia projects by students from previous years.

3) Evaluation module. This module takes into account all the material available on WebCT that provides flexible student evaluation during the learning

dence. 3) Dialogue: reasoning, consultation and comment. 4) Equality: equity, equivalence and coincidence. 5) Justice: law, impartiality and equanimity. 6) Peace: calm, harmony and affability. 7) Responsibility: fulfilment, bond and commitment. 8) Respect: consideration and admiration. 9) Solidarity: support, cooperation and union. 10) Tolerance: patience, lenience and acquiescence.

2. Possible negative values or counter-values including related values and attitudes: 1) Enmity: hostility, antipathy and animosity. 2) Mistrust: incredulity, suspicion and distrust. 3) Imposition: coercion, duress and compulsion. 4) Inequality: differentiation, racism and discrimination. 5) Injustice: illegality, illegitimacy and tyranny. 6) Violence: brutality, roughness and savagery. 7) Irresponsibility: lack of concern, foolishness and apathy. 8) Lack of respect: lack of consideration, humiliation and derision. 9) Lack of solidarity: egotism, competitiveness and individualism. 10) Intolerance: authoritarianism, racism and intransigence.

2.1.3. Dependent variables related with WebCT

The communication module takes into account

the assessment made by the students of the synchronous and asynchronous communication established by the teacher with the students, by the students with the teacher and among the students. The contents module also encompasses the evaluation made by students of the subject contents uploaded by the teacher onto WebCT. In the WebCT evaluation module, the following are evaluated by students: self-evaluation exercises, guidance for the presentation of group work, as well as a guide for putting together and delivering portfolios developed by groups and recorded on DVD.

2.1.4. Dependent variables: positive and negative values or counter-values contained in television series

The positive and negative values found in the analysis of verbal, non-verbal and para-verbal content in the series episodes analysed are included. By way of an example, here are a few phrases conveying negative values:

- Gender inequality (Shin Chan). Hiroshi: «Women are like that, you can never believe what they say».
- Mistrust and lack of respect (Recess). Ashley: «Get lost you miserable blabbermouth».
- Violence (The Simpsons). Homer: «Now fry you louts!».
- Imposition and violence (Knights of the Zodiac). Marín: «Seiya, if you want to get back to Japan you'll have to fight and beat Sira».

2.2. Data collection technique

The following data collection techniques were used for each variable.

2.2.1. Data collection technique in the communication, contents and evaluation modules of the WebCT

The following instruments and techniques were used to collect data: a) A questionnaire in which each item could be rated from 1 to 5 points (very little, little,

frequently, a fair amount, a lot), gathered information referring to the students' assessment of the communication, contents and evaluation modules available on WebCT as an aid to face-to-face teaching. b) The content analysis of documents collected by students on DVD in portfolios, designed as a training activity during the individual and collaborative group teaching-learning process. c) The field notes taken in face-to-face and virtual tutorials, as well as the presentation of work by students. d) The items related with tutorials, subject contents and the criteria provided anonymously by students in the institutional evaluation of the teacher.

2.2.2. Data collection technique for the content analysis of television series

Firstly, the technical specifications compiled by each of the student groups were evaluated, providing the following information: programme, genre, direction, production, script, timeslot and station. The description of the characters as bearers of values and counter-values manifested in their behaviours and attitudes was also evaluated.

The students watched and recorded each of the episodes of the chosen series, and then carried out the following tasks for data collection: a) Written transcription of the episodes of the television series. b) Reduction of the information, reflecting just the phrases, words, images and contexts in which a value or counter-value related with any of the ten categories of both positive and negative values appeared. c) They filled in the grids showing the frequency with which the values or counter-values associated with each of the categories appeared in the episodes. d) Using the Excel application, the frequencies and percentages of both positive and negative values were calculated. e) Conclusions and didactic proposals relating to the educational use of television were drawn up. f) Each group of students presented the study carried out of the selected series using the computer and multimedia materials created by the group.

Percentages	Friendship	Trust	Dialogue	Equality	Justice	Peace	Responsibility	Respect	Solidarity	Tolerance
Shin Chan	52,38%	4,76%	4,76%	4,76%	0,00%	0,00%	14,29%	4,76%	9,52%	4,76%
Family Guy	46,15%	7,69%	7,69%	0,00%	11,54%	7,69%	3,85%	0,00%	7,69%	7,69%
The Simpsons	60,71%	0,00%	5,36%	0,00%	1,79%	1,79%	26,79%	0,00%	3,57%	0,00%
Futurama	20,63%	15,63%	3,75%	6,25%	5,00%	5,63%	8,75%	9,38%	15,00%	10,00%
Dave the Barbarian	12,82%	7,69%	5,13%	7,69%	5,13%	12,82%	12,82%	15,38%	15,38%	5,13%
Captain Tsubasa	25,81%	16,13%	6,45%	0,00%	6,45%	3,23%	12,90%	9,68%	12,90%	6,45%
Oliver and Bengi	24,39%	7,32%	9,76%	4,88%	0,00%	2,44%	14,63%	21,95%	12,20%	2,44%
Lilo and Stitch	33,33%	11,11%	2,78%	0,00%	0,00%	2,78%	11,11%	5,56%	30,56%	2,78%
The Triplets	34,11%	11,63%	13,95%	1,55%	0,00%	1,55%	16,28%	7,75%	12,40%	0,78%
Recess	7,69%	5,77%	8,65%	8,65%	4,81%	6,73%	11,54%	11,54%	30,77%	3,85%
Knights of the Zodiac	30,56%	16,67%	13,89%	0,00%	5,56%	0,00%	5,56%	0,00%	27,78%	0,00%
Inspector Gadget	17,54%	10,53%	8,77%	1,75%	5,26%	0,00%	24,56%	10,53%	21,05%	0,00%
Series Mean	26,90%	10,33%	7,88%	3,80%	3,53%	3,94%	13,72%	8,70%	17,12%	4,08%

Table 1. Percentages of positive values in the TV series studied.

Finally, the projects were evaluated according to the following criteria: the capacity to analyse and identify the values and counter-values found by the students in the episodes analysed; creativity and innovation in expression through the use of ICT by students; and finally the didactic proposals designed by students.

3. Results

3.1. Results of the assessment of the communication, contents and evaluation modules of WebCT

The students provided the following assessment of the WebCT modules as an aid to face-to-face teaching: the most highly rated tools among students are all those related with evaluation (92.5%); the assessment of the contents module reached 90.5%, and finally, assessment of the communication module achieved 80.5%.

A small percentage of students stated they were more satisfied with just face-to-face teaching.

3.2. Results of the television series content analysis

The first row of Table 1 shows the ten categories of positive values and the first column on the left the titles of the series analysed. The final row contains the mean percentages achieved in each value for all series.

The axiological order of the positive values according to the mean percentage of all the series episodes analysed is as follows: 1. Friendship. 2. Solidarity. 3. Responsibility. 4. Trust. 5. Respect. 6. Dialogue. 7. Tolerance. 8. Peace. 9. Equality. 10. Justice.

In the individual analysis of each series, the value of friendship is present in all series, with a high percentage in The Simpsons and Shin Chan.

The highest percentages for the value of solidarity correspond to the series Recess and Lilo and Stitch.

In the episodes of The Simpsons analysed, there were no contents related with the value of trust.

There were no contents related with respect observed in the following series: Family Guy, The Simpsons and Knights of the Zodiac.

No contents related with tolerance were observed in the series: The Simpsons, Knights of the Zodiac and Inspector Gadget.

In series such as Inspector Gadget, Knights of the Zodiac and Shin Chan, there were no contents related with the value of peace.

There were no contents related with equality in the series: Family Guy, The Simpsons, Captain Tsubasa, Lilo and Stitch, and Knights of the Zodiac.

Furthermore, no contents related with justice were observed in the series Shin Chan, Oliver and Bengi, Lilo and Stitch, and The Triplets.

Table 2 shows the results of the content analysis of negative values or counter-values in the series analysed.

The axiological order of the negative values or counter-values according to the mean percentage of all the series analysed is as follows: 1. Lack of respect. 2. Violence. 3. Enmity. 4. Irresponsibility. 5. Imposition. 6. Intolerance. 7. Mistrust. 8. Lack of solidarity. 9. Inequality. 10. Injustice.

The episodes analysed of the series The Simpsons and Shin Chan achieved a high percentage of contents related with a lack of respect. Contents related with counter-values or negative values appeared in all the series analysed.

4. Discussion and conclusions

As regards the use of WebCT and ICT in general, they are felt to be important pillars that support the methodological innovation of the EHEA based on student-centred learning.

Processes of communication and reflection have been promoted among student teachers in collaborative spaces, in both the real and virtual classroom. The didactic guidelines and advice uploaded to the virtual classroom for the creation of portfolios recorded on DVD with a view to monitoring and making the ongoing evaluation of group work more flexible were

Percentages	Enmity	Mistrust	Imposition	Inequality	Injustice	Violence	Irresponsibility	Lack respect	Lack solidarity	Intolerance
Shin Chan	12,50%	3,13%	3,13%	3,13%	6,25%	12,50%	6,25%	46,88%	3,13%	3,13%
Family Guy	10,87%	6,52%	4,35%	4,35%	4,35%	19,57%	4,35%	26,09%	4,35%	15,22%
The Simpsons	3,70%	1,85%	0,93%	0,93%	1,85%	25,93%	4,63%	49,07%	6,48%	4,63%
Futurama	15,31%	5,74%	5,74%	7,18%	2,87%	15,31%	11,00%	25,84%	4,78%	6,22%
Dave Barbarian	10,26%	1,71%	5,13%	2,56%	3,42%	29,91%	9,40%	21,37%	6,84%	9,40%
Captain Tsubasa	14,29%	9,52%	4,76%	2,38%	4,76%	14,29%	16,67%	23,81%	7,14%	2,38%
Oliver Bengi	7,50%	12,50%	2,50%	10,00%	2,50%	20,00%	12,50%	20,00%	7,50%	5,00%
Lilo Stitch	16,13%	3,23%	6,45%	3,23%	3,23%	9,68%	29,03%	29,03%	12,90%	6,45%
The Triplets	29,73%	10,81%	9,01%	0,90%	3,60%	16,22%	8,11%	11,71%	6,31%	3,60%
Recess	13,41%	6,70%	10,61%	8,38%	0,56%	22,35%	3,91%	21,79%	1,12%	11,17%
Knights Zodiac	2,08%	4,17%	12,50%	2,08%	4,17%	27,08%	4,17%	29,17%	12,50%	2,08%
Inspect. Gadget	21,28%	8,51%	4,26%	6,38%	4,26%	25,53%	4,26%	17,02%	4,26%	4,26%
Series mean	13,23%	5,86%	6,62%	4,63%	2,93%	20,89%	7,56%	25,90%	5,77%	6,62%

Table 2. Percentages of negative values or counter-values in the TV series studied.

valued very positively by the students. Through WebCT, the individualisation and autonomy of student learning is fostered along with collaborative work, in addition to synchronous and asynchronous communication between the teacher and the students and among students. The materials related with the subject contents uploaded onto WebCT were rated positively by the students. The major advantages they point out include links from WebCT to audiovisual materials and digital journals included on the subject's compulsory reading list, which students can access when, for various reasons, they have been unable to attend class in person. The data obtained in this research display certain affinities with the findings of Hinojo et al. (2009: 165-174) in a study about student perceptions of blended learning in universities, affirming that methodologies focusing on e-learning are highly suitable in the process of learning-teaching in the university context.

The first research objective proposed in this study has been achieved, determining the assessment made by student teachers of the WebCT virtual classroom as an aid to face-to-face teaching, obtaining a very valuable assessment by said students of the WebCT virtual classroom as an aid to face-to-face teaching. A certain resistance was detected on the part of the students, since work set through WebCT and involving the use of ICT requires new learning skills, which indicates a certain degree of insecurity in this small percentage of students and a preference for the traditional face-to-face system where they already have the skills and abilities required without risking failure.

Pavón (2008: 119-134) highlights that there are few studies that give a clear account of the following aspects: learning outcomes achieved, level of user satisfaction, and monitoring and evaluation carried out. In this empiric research, these aspects have been analysed, which is considered an important contribution. Without aiming to extrapolate the results owing to the representativeness of the sample, we can confirm that in general the students have achieved a better performance than previous years. The facility for synchronous and asynchronous communication, together with team work, enriches all members of the group and favours intra-group participation.

As regards the second research objective, we can confirm that students, through the Internet and other search engines, found the information required to complete the technical specifications of the television series episodes, and to compile contents in multimedia formats, demonstrating their audiovisual competence in the area of value analysis and expression. Student

teachers give new meaning to the educational use of television series, since the popularity of amateur distribution productions of multimedia applications offer them the opportunity to stimulate innovation and creativity by recombining images and sounds. This involves altering, inserting, deleting, editing, combining or changing the sequence of a text or images to produce something different to the recording made from the television.

As regards the content analysis of the values and counter-values in the television series analysed in this research, similar results were found to those of Professor Sevillano (2005: 284) who states that children prefer programmes characterised by action and violence. Cruz (2006: 117-145), on the other hand, in line with the results of this research, finds that the values related with friendship and camaraderie occupy the top positions in the axiological order found, along with the counter-values related with the lack of respect and intransigence. As regards gender stereotypes, Espinar (2007: 129-134) observes a higher presence of male characters in the case of US and Japanese programming.

In this research, the content analysis of the values and counter-values conveyed in each of the series individually and their comparative study with all the series analysed is considered a contribution in comparison with previous research. This enables us to know which types of values and counter-values dominate in each series and draw conclusions regarding the evident need for adequate selection of television programmes with children and teenagers in order to generate attitudes of dialogue, communication, information and negotiation, among others. We share the opinion expressed by Pinto da Mota (2008: 121-127) that television should be more exploited as an educational instrument within the family context.

The transcription of episodes and debate regarding the selection of phrases and images conveying associated values and counter-values offered an excellent opportunity for in-depth reflection on audiovisual contents with student teachers. Since cartoon images allow for not only a denotative but also a connotative reading, there is room for truly inter-textual interpretation (verbal, non-verbal and para-verbal communication). Cartoon series are used in schools explicitly to observe the feelings and emotions of the characters, through which the students can project themselves and identify their strengths and weakness with the intention to change and achieve through the vicarious errors expressed by the characters. The positive values conveyed by cartoon series shown on television favour

the development of affective and emotional attitudes towards life that, at times, are not dealt with very frequently within the family and school settings. Carefully chosen educational and curricular programmes undoubtedly provide didactic resources to acquire conceptual contents and promote the affective and emotional development of children and teenagers. In spite of criticism based on the research carried out and attempts to regulate television contents, children's programming does not seem to interest media owners. Along these same lines, we concur with Del Río and Del Río (2008: 99-108) who affirm that it is necessary for television content analysis tools to be tackled by an Observatory that guides families and teachers about the contents of educational audiovisual culture in accordance with the evolutionary development of the child.

According to Aguaded (2009: 7-8), it is necessary to emphasise that the institutional commitment to renew and undertake major transformation in the European and Spanish higher education systems can be valued positively. However, there are certain exogenous and endogenous agents that are undermining this educational opportunity for the future, such as the suppression of the core subject Technology Applied to Education in the teacher training curricula agreed in the 1990s in the Official State Bulletin, in which no scope was given to certain technophobic teachers present in Teacher Training Courses and Education Faculties who, when drawing up the new curricula for the Primary Education Teaching Degree and Infant Education Teaching Degree have ignored everything relating to didactic training in communication technologies, on the grounds that their contents are already transversal. In the training of future teachers, analysis, reflection and didactic use of contents transmitted through communication and information technologies are required. Thinking that future teachers can teach

using technologies without having learned their didactic uses and possibilities for educational application tarnishes the curricula of Teaching Degrees in Universities that have achieved the anachronistic accomplishment of approving such technophobic curricula.

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